

BC ENERGY COMPLIANCE REPORT - PERFORMANCE PATHS FOR PART 9 BUILDINGS

Revised July 15, 2020

For Buildings Complying with Subsection 9.36.5. or 9.36.6. of the 2018 BC Building Code (see BCBC Article 2.2.8.3. of Division C)

A: PROJECT INFORMATION

Building Permit #: <u>123456</u>	Building Type*: <u>Single Detached</u> ▼
Builder: <u>ABC Design</u>	If Other, Please Specify:
Project Address: <u>1234 Fulton Ave</u>	Number of Dwelling Units: <u>1</u>
Municipality / District: <u>West Vancouver</u>	Climate Zone: <u>4 - Less than 3000</u>
Postal Code: <u>V1V 1V1</u>	Heating Degree Days: <u>2,950</u>
PID or Legal Description: <u>010-123-456</u>	Floor Area of Conditioned Space (m²): <u>385.66</u>

BC Building Code Performance Compliance Path: (Select boxes that apply)

Building Type must be selected in order to auto populate this report correctly

- 9.36.6. ➔ Complete Sections A, B, D, & E
- 9.36.5., NOT complying with Step Code ➔ Complete Sections A, B, C, & E
- 9.36.5., complying with Step Code ➔ Complete Sections A, B, C, D & E

Software Name: HOT2000 Version: 11.1 Climatic Data (Location): West Vancouver, BC

B: BUILDING CHARACTERISTICS SUMMARY (see BCBC Clause 2.2.8.3.(2)(b) of Division C)

	Details (Assembly / System Type / Fuel Type / Etc.)		Eff R _{SI} , U _{SI} , SHGC, etc
Exterior Walls & Floor Headers	Exterior Walls: 2x6 @ 16" o.c., R-24 batt insulation, Stucco cladding	Effective R _{SI}	RSI-3.50
	Floor Headers: R-24 insulation		RSI-4.15
Roof / Ceilings	Pitched roof/attic: Engineered trusses @ 24" o.c., R-50 batt insulation	Effective R _{SI}	RSI-6.62
	Flat roof/deck: TJI 11.875" @ 16" o.c., 6" XPS insulation (R-30)		RSI-5.84
Foundation Walls, Headers, & Slabs	Foundation Walls: 8" concrete, 2x4 @ 16" o.c., R-14 batt insulation	Effective R _{SI}	RSI-1.85
	Slab-on-grade: 3" EPS insulation (R-12) below full slab area		RSI-2.10
	Slab Is: <input checked="" type="checkbox"/> Below OR <input type="checkbox"/> Above Frost Line <input checked="" type="checkbox"/> Heated OR <input type="checkbox"/> Unheated		
Floors Over Unheated Spaces	TJI 11.875" @ 16" o.c., R-28 2 lb spray foam insulation	Effective R _{SI}	RSI-5.89
Fenestration & Doors	Windows: USI-1.48 or less, SHGC 0.42 or more	U _{SI} SHGC	USI-1.48 SHGC 0.42
	Exterior Doors: U-1.20 or less		
	FDWR: <u>27.7</u> %		
Air Barrier System & Location	Interior sealed poly air and vapour barrier		
Space Conditioning (Heating & Cooling)	Heating and Cooling: Air-Source Heat Pump (16 SEER)	%, HSPF, or SEER	2.87 System COP
Service Water Heating	Electric Hot Water Tank	EF or % eff	EF 0.80
Ventilation	Heat recovery ventilator		SRE@ 0C 60%
	Kitchen exhaust fan 50 L/s		SRE @ -25C 55%
Other Energy Impacting Features	Two natural gas fireplace, 2 kW output, 30% SSE		

Based on information provided by the builder and drawings prepared by

ABC Design

Dated (YYYY/MM/DD)

2021/02/28

C: 9.36.5. ENERGY PERFORMANCE COMPLIANCE (see BCBC Clause 2.2.8.3.(2)(c) of Division C)

Complete this section if using the Energy Performance Compliance Path in Subsection 9.36.5.

Proposed House Energy Consumption (GJ/year)	
HVAC	
Hot Water Heating	
SUM	-

Reference House Rated Energy Target (GJ/year)	
HVAC	
Hot Water Heating	
SUM	-

The airtightness value used in the energy model calculations for the Proposed house is:

- 4.5 ACH @ 50Pa 3.5 ACH @ 50Pa **OR** Tested At _____ ACH @ 50Pa

The above calculation was performed in compliance with Subsection 9.36.5. of Division B: Yes No

D: 9.36.6. ENERGY STEP CODE COMPLIANCE (see BCBC Sentence 2.2.8.3.(3) of Division C)

Complete this section if using the Energy Step Code Compliance Path in Subsection 9.36.6.

If using 9.36.5 to comply with 9.36.6, print and manually fill in the table below. The table below auto-fills from the calculator worksheets and the fields cannot be overwritten.

Rated Energy Consumption (GJ/year):	Proposed House <u>45</u>	Reference House <u>55</u>	HDD: <u>2,950</u>
Metric	Units	Required	Proposed
Step Code Level	Step 1, 2, 3, 4, or 5	3	3
Mechanical Energy Use Intensity (MEUI)	kWh/(m ² -year)	55 <i>(max)</i>	32
ERS Rating % Lower Than EnerGuide Reference House, <i>where applicable</i>	%	20 <i>(min)</i>	18.2
Thermal Energy Demand Intensity (TEDI)	kWh/(m ² -year)	30 <i>(max)</i>	29
Adjusted TEDI	kWh/(m ² -year)	39 <i>(max)</i>	29
Building Envelope % Better	%	10 <i>(max)</i>	18
Airtightness in Air Changes per Hour at 50 Pa differential	ACH @ 50 Pa	2.5 <i>(max)</i>	2.5
Step Code Design Requirements Met:			Yes

The above calculation was performed in compliance with (see BCBC Clause 2.2.8.3.(2)(e) of Division C)

Select one:

- Subsection 9.36.5.,
- The Passive House Planning Package (PHPP), version 9 or newer, and the energy model was prepared by a Certified Passive House Designer or Certified Passive House Consultant,
- The EnerGuide Rating System (ERS), version 15 or newer, or
- The applicable requirements of NECB Part 8 and the City of Vancouver Energy Modelling Guidelines.
- The "Instructions for Modelling Attached Ground Oriented Part 9 Residential Buildings" (found in Section 6 of the BC Energy Compliance Reports Instruction Manual)

E: COMPLETED BY

Full Name (Print): Jane Smith
 Company Name: XYZ Energy Advisors
 Phone: 604-123-4567
 Address: 1234 Main Street
 Email: jsmith@xyz.ca
 Date (dd/mm/yyyy) 28/02/2021
 CODECO entered into Info Field 8 of HOT 2000

Service Organization: CHBA BC
 Service Organization #: 1234 Advisor ID #: 1234
EnerGuide P-file #'s: 1234P0100

Note: The same EA will have different ID #s with different SOs

SUPPLEMENTARY INFORMATION

Supplementary information is not required for Code Compliance but may be requested by the local municipality/district. Where applicable, all metrics within Section F are calculated with baseloads included. If required, complete the applicable sections below.

F: OTHER ENERGY MODELLING METRICS

#	Metric	Units	Reference House	Proposed House
1	Normalized Leakage Area (NLA) @10Pa	cm ² /m ²	1.58	1.07
2	Rated Greenhouse Gas Emissions	kg/year	2670	900
3	Rated Greenhouse Gas Intensity	kg/m ² /year	6.92	2
4	Rated Energy Use Intensity	GJ/m ² /year	0.19	0.17
5	Peak Thermal Load (PTL)	W/m ²	0	-
6	% of the Building's Conditioned Space Served by Space-Cooling Equipment	%	N/A	More than 50%
7	% Lower Than Reference House With Baseloads Included	%	N/A	13.3%

#	Energy Source	Reference House Energy Consumption (GJ/year)	Proposed House Energy Consumption (GJ/year)
8	Electricity	34.80	56.80
	Natural Gas	96.4	16.4
	Propane	-	-
	District Energy	N/A	-
	On-Site Renewables	N/A	-
	Other:	-	-
	Total	131.2	73.2

G: OPTIONAL CERTIFICATIONS

PENDING

- BUILTGREEN®, Level: _____
- Certified Passive House
- CHBA Net Zero House

PENDING

- ENERGY STAR® for New Homes
- LEED® for Homes
- R2000
- Other: _____